

CLAIMS

What is claimed is:

1. A protocol-independent method for processing messages in an enterprise integration application system having at least three processors, comprising the acts of:
 - installing at least one host processor and at least one channel processor, each said channel processor in operative communication with two corresponding processors;
 - receiving at least one received message at a first host processor via a source channel processor, each received message having at least one corresponding message key, said message key including corresponding processing indicia;
 - maintaining dynamic configuration information for said first host processor, including the acts of:
 - associating each said host processor with corresponding communicating channel processors operatively communicating with said host processor;
 - associating each said host processor with corresponding transfer channel processors operatively communicating with said first host processor;
 - associating message keys with corresponding destination data, each said destination datum including a destination host processor and a destination channel processor;
 - forwarding messages corresponding to said received message from said first host processor to a destination transfer channel processor corresponding to a

20 destination host processor determined by reference to said destination data
 21 corresponding to a message key of said received message;
 22 whereby messages originating from a channel processor are dynamically routed through
 23 said enterprise integration application system in accordance with said association
 24 between message keys and destination data

1 2. The method in claim 1, further including the act of updating dynamic configuration
 2 information for said first host processor based upon the contents of said received
 3 message.

1 3. The method in claim 1, wherein said act of maintaining dynamic configuration
 2 information for said first host processor further includes the act of associating each
 3 said transfer channel processor with a communication protocol specification selected
 4 from at least two communication protocol specifications; and wherein said act of
 5 forwarding further includes the act of conforming with the communication protocol
 6 specification associated with said destination transfer channel processor.

1 4. The method in claim 1, wherein said enterprise integration application system
 2 includes at least one terminal processor and the act of associating message keys with
 3 corresponding destination data depends upon conforming to a predetermined set of
 4 rules relating to the integration and operation of said at least one terminal processor
 5 into said enterprise integration application.

5. The method in claim 3, wherein said business rules include rules providing for the translation of data from one termination application into a format suitable for use for a second termination application.

6. The method in claim 1, wherein said messages include a unique primary message key; and wherein said message keys further includes identification of an origin host processor, an origin channel processor, origin processing indicia, a source host processor, a source channel processor, and source processing indicia.

7. The method in claim 6, wherein the method of forwarding messages includes the acts of:

- determining destination data corresponding to said received message by reference to a message key of said received message;
- preparing a forwarding message corresponding to said received message and said destination datum; and
- sending each said forwarding message to said transfer channel processor corresponding to said destination datum host processor.

8. The method in claim 1, further including the act of determining whether said received message is a transfer message having an original message and an original message key; wherein said act of determining destination data corresponding to said received message includes the acts of:

- 5 • determining destination data by reference to said primary key when said received

6 message is not a transfer message; and
- 7 • determining destination data by reference to said original message key when said

8 received message is a transfer message;

9 and wherein said act of preparing a forwarding message includes the acts of:
- 10 • preparing a message substantially similar to said included message when said

11 received message is a transfer message and said destination host processor is said

12 first host processor;
- 13 • preparing a transfer message including said received message when said received

14 message is not a transfer message and said destination host processor is not said

15 first host processor; and
- 16 • preparing a message substantially similar to said received message when either

17 said received message is not a transfer message and said destination host

18 processor is said first host processor; or when said received message is a transfer

19 message and said destination host processor is said first host processor.

- 1 9. The method in claim 1, wherein said act of maintaining dynamic configuration

2 information for said first host processor further includes the act of associating each

3 communicating channel processor with a communication protocol specification

4 selected from a predetermined set of at least two communication protocol

5 specifications; and wherein all acts of sending a message from a host processor to an

6 communicating channel processor are performed in conformance with the

7 communication protocol specification associated with said communicating channel
8 processor.

1 10. A system for processing messages in an enterprise integration application system
2 having at least three processors, comprising:

- 3 • logic for the act of installing at least one host processor and at least one channel
4 processor, each said channel processor in operative communication with two
5 corresponding processors;
- 6 • logic for the act of receiving at least one received message at a first host processor
7 via a source channel processor, each received message having at least one
8 corresponding message key, said message key including corresponding
9 processing indicia;
- 10 • logic for the act of maintaining dynamic configuration information for said first
11 host processor, including:
 - 12 • logic for the act of associating each said host processor with corresponding
13 communicating channel processors operatively communicating with said host
14 processor;
 - 15 • logic for the act of associating each said host processor with corresponding
16 transfer channel processors operatively communicating with said first host
17 processor;
 - 18 • logic for the act of associating message keys with corresponding destination
19 data, each said destination datum including a destination host processor and a
20 destination channel processor;

21 • logic for the act of forwarding messages corresponding to said received message
 22 from said first host processor to a destination transfer channel processor
 23 corresponding to a destination host processor determined by reference to said
 24 destination data corresponding to a message key of said received message;
 25 whereby messages originating from a channel processor are dynamically routed through
 26 said enterprise integration application system in accordance with said association
 27 between message keys and destination data

1 11. The system in claim 10, further including logic for the act of updating dynamic
 2 configuration information for said first host processor based upon the contents of said
 3 received message.

1 12. The system in claim 10, wherein said logic for the act of maintaining dynamic
 2 configuration information for said first host processor further includes logic for
 3 associating each said transfer channel processor with a communication protocol
 4 specification selected from at least two communication protocol specifications; and
 5 wherein said logic for the act of forwarding further includes logic for conforming
 6 with the communication protocol specification associated with said destination
 7 transfer channel processor.

1 13. The system in claim 10, wherein said enterprise integration application system
 2 includes at least one terminal processor and said logic for the act of associating
 3 message keys with corresponding destination data depends upon conforming to a

predetermined set of rules relating to the integration and operation of said at least one terminal processor into said enterprise integration application.

14. The system in claim 13, wherein said business rules include rules providing for the translation of data from one termination application into a format suitable for use for a second termination application.

15. The system in claim 10, wherein said messages include a unique primary message key; and wherein said message keys further includes identification of an origin host processor, an origin channel processor, origin processing indicia, a source host processor, a source channel processor, and source processing indicia.

16. The system in claim 15, wherein the logic for forwarding messages includes:

- logic for the act of determining destination data corresponding to said received message by reference to a message key of said received message;
- logic for the act of preparing a forwarding message corresponding to said received message and said destination datum; and
- logic for the act of sending each said forwarding message to said transfer channel processor corresponding to said destination datum host processor.

17. The system in claim 10, further including logic for the act of determining whether said received message is a transfer message having an original message and an

original message key; wherein said logic for the act of determining destination data corresponding to said received message includes:

- logic for determining destination data by reference to said primary key when said received message is not a transfer message; and
 - logic for the act of determining destination data by reference to said original message key when said received message is a transfer message;
- and wherein said logic for preparing a forwarding message includes:

- logic for the act of preparing a message substantially similar to said included message when said received message is a transfer message and said destination host processor is said first host processor;
- logic for the act of preparing a transfer message including said received message when said received message is not a transfer message and said destination host processor is not said first host processor; and
- logic for the act of preparing a message substantially similar to said received message when either said received message is not a transfer message and said destination host processor is said first host processor; or when said received message is a transfer message and said destination host processor is said first host processor.

18. The system in claim 10, wherein said logic for the act of maintaining dynamic configuration information for said first host processor further includes logic for associating each communicating channel processor with a communication protocol specification selected from a predetermined set of at least two communication

protocol specifications; and wherein all logic for the acts of sending a message from a host processor to an communicating channel processor specifies communication in conformance with the communication protocol specification associated with said communicating channel processor.

19. A computer program product for processing messages in an enterprise integration application system having at least three processors, comprising:

- computer code for the act of installing at least one host processor and at least one channel processor, each said channel processor in operative communication with two corresponding processors;
- computer code for the act of receiving at least one received message at a first host processor via a source channel processor, each received message having at least one corresponding message key, said message key including corresponding processing indicia;
- computer code for the act of maintaining dynamic configuration information for said first host processor, including:
 - computer code for the act of associating each said host processor with corresponding communicating channel processors operatively communicating with said host processor;
 - computer code for the act of associating each said host processor with corresponding transfer channel processors operatively communicating with said first host processor;

18 • computer code for the act of associating message keys with corresponding
19 destination data, each said destination datum including a destination host
20 processor and a destination channel processor;

21 • computer code for the act of forwarding messages corresponding to said received
22 message from said first host processor to a destination transfer channel processor
23 corresponding to a destination host processor determined by reference to said
24 destination data corresponding to a message key of said received message;

25 whereby messages originating from a channel processor are dynamically routed through
26 said enterprise integration application system in accordance with said association
27 between message keys and destination data

1 20. The system in claim 19, further including computer code for the act of updating
2 dynamic configuration information for said first host processor based upon the
3 contents of said received message.

1 21. The system in claim 19, wherein said computer code for the act of maintaining
2 dynamic configuration information for said first host processor further includes
3 computer code for associating each said transfer channel processor with a
4 communication protocol specification selected from at least two communication
5 protocol specifications; and wherein said computer code for the act of forwarding
6 further includes computer code for the act of conforming with the communication
7 protocol specification associated with said destination transfer channel processor.

1 22. The system in claim 19, wherein said enterprise integration application system
 2 includes at least one terminal processor and said computer code for the act of
 3 associating message keys with corresponding destination data depends upon
 4 conforming to a predetermined set of rules relating to the integration and operation of
 5 said at least one terminal processor into said enterprise integration application.

1 23. The system in claim 22, wherein said business rules include rules providing for the
 2 translation of data from one termination application into a format suitable for use for
 3 a second termination application.

1 24. The system in claim 19, wherein said messages include a unique primary message
 2 key; and wherein said message keys further includes identification of an origin host
 3 processor, an origin channel processor, origin processing indicia, a source host
 4 processor, a source channel processor, and source processing indicia.

1 25. The system in claim 24, wherein the computer code for the act of forwarding
 2 messages includes:
 3 • computer code for the act of determining destination data corresponding to said
 4 received message by reference to a message key of said received message;
 5 • computer code for the act of preparing a forwarding message corresponding to
 6 said received message and said destination datum; and
 7 • computer code for the act of sending each said forwarding message to said
 8 transfer channel processor corresponding to said destination datum host processor.

1 26. The system in claim 19, further including computer code for the act of determining
2 whether said received message is a transfer message having an original message and
3 an original message key; wherein said computer code for determining destination data
4 corresponding to said received message includes:

- 5 • computer code for the act of determining destination data by reference to said
6 primary key when said received message is not a transfer message; and
- 7 • computer code for the act of determining destination data by reference to said
8 original message key when said received message is a transfer message;
9 and wherein said computer code for preparing a forwarding message includes:
10 • computer code for the act of preparing a message substantially similar to said
11 included message when said received message is a transfer message and said
12 destination host processor is said first host processor;
- 13 • computer code for the act of preparing a transfer message including said received
14 message when said received message is not a transfer message and said
15 destination host processor is not said first host processor; and
- 16 • computer code for the act of preparing a message substantially similar to said
17 received message when either said received message is not a transfer message and
18 said destination host processor is said first host processor; or when said received
19 message is a transfer message and said destination host processor is said first host
20 processor.

1 27. The system in claim 19, wherein said computer code for the act of maintaining
2 dynamic configuration information for said first host processor further includes

3 computer code for the act of associating each communicating channel processor with
 4 a communication protocol specification selected from a predetermined set of at least
 5 two communication protocol specifications; and wherein all computer code for the act
 6 of sending a message from a host processor to an communicating channel processor
 7 specifies communication in conformance with the communication protocol
 8 specification associated with said communicating channel processor.

TPA#1699220.07